

# DIABETES IN TIPDON

## Estimated Number of Persons With Diabetes (PWD) in TIPDON

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **51,540 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **1,100 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **540 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **21,080 adults have diabetes but are not aware of it.**<sup>4</sup> Among adults, **143,185 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in TIPDON in 2002 Diagnosed with Diabetes<sup>1</sup>

Age Group	Total*	Female	Male	White	African American
18-44	7,380	3,850	3,530	6,560	440
45-54	9,740	5,270	4,470	8,810	390
55-64	11,770	5,460	6,310	11,100	480
65-74	11,640	6,270	5,370	10,900	500
75+	11,010	6,270	4,740	10,480	330
<b>Total</b>	<b>51,540</b>	<b>27,120</b>	<b>24,420</b>	<b>47,850</b>	<b>2,140</b>
(95% CI**)	(±5,260)	(±3,660)	(±3,780)	(±5,140)	(±740)

\* Difference in totals is due to presence of 1,550 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in TIPDON may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the 6th leading cause of death in Michigan. Diabetes was the primary cause of death for 239 individuals (3.4% of all deaths) and a contributing cause in an additional 511 deaths (7.2%).<sup>6</sup>

### Deaths in TIPDON of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	Male	White	Female	Male
0-44	10 (1.36)	5 (NA)	5 (NA)		0 (NA)	0 (NA)
45-54	16 (1.64)	4 (NA)	12 (2.90)		0 (NA)	0 (NA)
55-64	27 (2.29)	12 (2.34)	14 (2.34)		0 (NA)	0 (NA)
65-74	56 (4.81)	29 (4.95)	23 (4.56)		0 (NA)	4 (NA)
75+	130 (11.81)	77 (12.94)	51 (11.26)		0 (NA)	0 (NA)
<b>Total</b>	<b>239 (4.64)</b>	<b>127 (5.09)</b>	<b>105 (4.58)</b>		<b>0 (NA)</b>	<b>4 (NA)</b>

\*Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

## Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)<sup>7</sup>

In 2002, there were 14,288 hospital discharges of TIPDON residents where diabetes was listed among the diagnoses. There were 751 (5.3%) of these hospitalizations that were directly due to diabetes, while an additional 5,278 (36.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 16,354 discharges with 963 (8.1%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	963	8.1%	751	5.3%
Hypertension	162	2.6%	151	1.1%
Other CVD	5,999	32.0%	5,127	35.9%
Kidney	172	1.1%	198	1.4%
Pneumonia	519	3.3%	446	3.1%
Other	8,539	53.0%	7,615	53.3%
<b>TOTAL</b>	<b>16,354</b>		<b>14,288</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 81 or 10.8% of the 751 hospital discharges with a primary diagnosis of diabetes. This compares to 128 amputations or 13.3% of the 963 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

Further information can be obtained from:

Michigan Department of Community Health, Division of Chronic Disease and Injury Control/Diabetes, Kidney and Other Chronic Diseases Section  
by calling (517) 335-8445 or on the WEB at: <http://www.michigan.gov/diabetes>

# DIABETES IN ALCONA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Alcona County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **900 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **380 Alcona County adults have diabetes but are not aware of it.**<sup>4</sup> Among Alcona County adults, **2,363 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Alcona County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	70 ( 2.4)	40 ( 2.7)	30 ( 2.1)	70 ( 2.4)
45-54	120 ( 7.4)	70 ( 8.6)	50 ( 6.2)	110 ( 7.0)
55-64	230 (12.3)	100 (10.9)	130 (13.6)	230 (12.2)
65-74	260 (16.1)	130 (17.2)	120 (14.9)	250 (15.6)
75+	220 (17.6)	120 (16.6)	100 (19.0)	210 (17.3)
<b>Total</b> (95% CI**)	<b>900 ( 7.2)</b> (±80)	<b>460 ( 7.7)</b> (±50)	<b>430 ( 6.8)</b> (±60)	<b>870 ( 7.2)</b> (±80)

\* Difference in totals is due to presence of 10 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Alcona County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Alcona County residents. Diabetes was the primary cause of death for 6 individuals (3.4% of all deaths) and a contributing cause in an additional 12 deaths (6.7%).<sup>6</sup>

### Deaths in Alcona County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	3 (NA)	0 (NA)		3 (NA)
65-74	1 (NA)	0 (NA)		1 (NA)
75+	2 (NA)	0 (NA)		2 (NA)
<b>Total</b>	<b>6 (NA)</b>	<b>0 (NA)</b>		<b>6 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 301 hospital discharges of Alcona County residents where diabetes was listed among the diagnoses. There were 10 (3.3%) of these hospitalizations that were directly due to diabetes, while an additional 116 (38.5%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 277 discharges with 9 (3.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	9	3.3%	10	3.3%
Hypertension	3	1.1%	3	1.0%
Other CVD	113	40.8%	113	37.5%
Kidney	2	0.7%	1	0.3%
Pneumonia	10	3.6%	7	2.3%
Other	140	50.5%	167	55.5%
<b>TOTAL</b>	<b>277</b>		<b>301</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 10.0% of the 10 hospital discharges with a primary diagnosis of diabetes. This compares to 0 amputations or 0.0% of the 9 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN ALPENA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Alpena County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,940 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **790 Alpena County adults have diabetes but are not aware of it.**<sup>4</sup> Among Alpena County adults, **5,415 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Alpena County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	250 ( 2.4)	140 ( 2.7)	110 ( 2.1)	250 ( 2.4)
45-54	350 ( 7.4)	200 ( 8.6)	150 ( 6.2)	330 ( 7.0)
55-64	420 (12.3)	190 (10.9)	230 (13.6)	410 (12.2)
65-74	450 (16.1)	260 (17.2)	200 (14.9)	440 (15.6)
75+	470 (17.6)	290 (16.6)	180 (19.0)	460 (17.3)
<b>Total</b> (95% CI**)	<b>1,940 ( 7.2)</b> (±190)	<b>1,080 ( 7.7)</b> (±140)	<b>870 ( 6.8)</b> (±140)	<b>1,890 ( 7.2)</b> (±200)

\* Difference in totals is due to presence of 70 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Alpena County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Alpena County residents. Diabetes was the primary cause of death for 13 individuals (3.6% of all deaths) and a contributing cause in an additional 49 deaths (13.7%).<sup>6</sup>

### Deaths in Alpena County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	1 (NA)	0 (NA)	0 (NA)
45-54	1 (NA)	1 (NA)	0 (NA)	0 (NA)
55-64	1 (NA)	0 (NA)	1 (NA)	1 (NA)
65-74	2 (NA)	2 (NA)	0 (NA)	0 (NA)
75+	8 (17.02)	5 (NA)	3 (NA)	3 (NA)
<b>Total</b>	<b>13 (6.70)</b>	<b>9 (8.74)</b>	<b>4 (NA)</b>	<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 824 hospital discharges of Alpena County residents where diabetes was listed among the diagnoses. There were 36 (4.4%) of these hospitalizations that were directly due to diabetes, while an additional 313 (38.0%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 812 discharges with 56 (6.9%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	56	6.9%	36	4.4%
Hypertension	18	2.2%	13	1.6%
Other CVD	271	33.4%	300	36.4%
Kidney	5	0.6%	9	1.1%
Pneumonia	29	3.6%	22	2.7%
Other	433	53.3%	444	53.9%
<b>TOTAL</b>	<b>812</b>		<b>824</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 2 or 5.6% of the 36 hospital discharges with a primary diagnosis of diabetes. This compares to 10 amputations or 17.9% of the 56 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN ANTRIM COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Antrim County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,480 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **30 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **620 Antrim County adults have diabetes but are not aware of it.**<sup>4</sup> Among Antrim County adults, **4,174 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Antrim County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	190 ( 2.4)	110 ( 2.7)	90 ( 2.1)	190 ( 2.4)
45-54	250 ( 7.4)	140 ( 8.6)	110 ( 6.2)	230 ( 7.0)
55-64	350 (12.3)	160 (10.9)	190 (13.6)	350 (12.2)
65-74	380 (16.1)	210 (17.2)	170 (14.9)	360 (15.6)
75+	310 (17.6)	170 (16.6)	140 (19.0)	310 (17.3)
<b>Total</b> (95% CI**)	<b>1,480 ( 7.2)</b> (±150)	<b>790 ( 7.7)</b> (±100)	<b>700 ( 6.8)</b> (±110)	<b>1,440 ( 7.2)</b> (±150)

\* Difference in totals is due to presence of 50 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Antrim County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Antrim County residents. Diabetes was the primary cause of death for 10 individuals (4.5% of all deaths) and a contributing cause in an additional 10 deaths (4.5%).<sup>6</sup>

### Deaths in Antrim County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	0 (NA)	1 (NA)	1 (NA)
45-54	1 (NA)	0 (NA)	1 (NA)	1 (NA)
55-64	0 (NA)	0 (NA)	0 (NA)	0 (NA)
65-74	2 (NA)	1 (NA)	1 (NA)	1 (NA)
75+	6 (NA)	4 (NA)	2 (NA)	2 (NA)
<b>Total</b>	<b>10 (6.76)</b>	<b>5 (NA)</b>	<b>5 (NA)</b>	<b>5 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 479 hospital discharges of Antrim County residents where diabetes was listed among the diagnoses. There were 29 (6.1%) of these hospitalizations that were directly due to diabetes, while an additional 169 (35.3%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 387 discharges with 23 (5.9%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	23	5.9%	29	6.1%
Hypertension	4	1.0%	2	0.4%
Other CVD	153	39.5%	167	34.9%
Kidney	2	0.5%	9	1.9%
Pneumonia	10	2.6%	12	2.5%
Other	195	50.4%	260	54.3%
<b>TOTAL</b>	<b>387</b>		<b>479</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 10.3% of the 29 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 13.0% of the 23 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN BENZIE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Benzie County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,040 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **430 Benzie County adults have diabetes but are not aware of it.**<sup>4</sup> Among Benzie County adults, **2,896 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Benzie County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	140 ( 2.4)	80 ( 2.7)	60 ( 2.1)	130 ( 2.4)
45-54	180 ( 7.4)	110 ( 8.6)	70 ( 6.2)	170 ( 7.0)
55-64	230 (12.3)	100 (10.9)	130 (13.6)	230 (12.2)
65-74	260 (16.1)	140 (17.2)	120 (14.9)	250 (15.6)
75+	230 (17.6)	130 (16.6)	100 (19.0)	230 (17.3)
<b>Total</b> (95% CI**)	<b>1,040 ( 7.2)</b> (±100)	<b>560 ( 7.7)</b> (±70)	<b>480 ( 6.8)</b> (±80)	<b>1,010 ( 7.2)</b> (±110)

\* Difference in totals is due to presence of 40 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Benzie County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Benzie County residents. Diabetes was the primary cause of death for 7 individuals (4.2% of all deaths) and a contributing cause in an additional 7 deaths (4.2%).<sup>6</sup>

### Deaths in Benzie County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)	0 (NA)	0 (NA)
45-54	0 (NA)	0 (NA)	0 (NA)	0 (NA)
55-64	0 (NA)	0 (NA)	0 (NA)	0 (NA)
65-74	4 (NA)	0 (NA)	4 (NA)	0 (NA)
75+	3 (NA)	2 (NA)	1 (NA)	1 (NA)
<b>Total</b>	<b>7 (6.73)</b>	<b>2 (NA)</b>	<b>5 (NA)</b>	<b>0 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 288 hospital discharges of Benzie County residents where diabetes was listed among the diagnoses. There were 12 (4.2%) of these hospitalizations that were directly due to diabetes, while an additional 117 (40.6%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 262 discharges with 14 (5.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	14	5.3%	12	4.2%
Hypertension	1	0.4%	0	0.0%
Other CVD	92	35.1%	117	40.6%
Kidney	2	0.8%	4	1.4%
Pneumonia	9	3.4%	6	2.1%
Other	144	55.0%	149	51.7%
<b>TOTAL</b>	<b>262</b>		<b>288</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 0 or 0.0% of the 12 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 21.4% of the 14 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN CHARLEVOIX COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Charlevoix County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,550 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **640 Charlevoix County adults have diabetes but are not aware of it.**<sup>4</sup> Among Charlevoix County adults, **4,477 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Charlevoix County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	220 ( 2.4)	120 ( 2.7)	90 ( 2.1)	210 ( 2.4)
45-54	290 ( 7.4)	170 ( 8.6)	120 ( 6.2)	270 ( 7.0)
55-64	370 (12.3)	160 (10.9)	200 (13.6)	360 (12.2)
65-74	340 (16.1)	190 (17.2)	150 (14.9)	330 (15.6)
75+	330 (17.6)	190 (16.6)	140 (19.0)	320 (17.3)
<b>Total</b> (95% CI**)	<b>1,550 ( 7.2)</b> (±160)	<b>830 ( 7.7)</b> (±110)	<b>700 ( 6.8)</b> (±110)	<b>1,490 ( 7.2)</b> (±160)

\* Difference in totals is due to presence of 50 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Charlevoix County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Charlevoix County residents. Diabetes was the primary cause of death for 9 individuals (3.7% of all deaths) and a contributing cause in an additional 21 deaths (8.6%).<sup>6</sup>

### Deaths in Charlevoix County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	2 (NA)	0 (NA)		2 (NA)
65-74	2 (NA)	1 (NA)		1 (NA)
75+	5 (NA)	4 (NA)		1 (NA)
<b>Total</b>	<b>9 (5.81)</b>	<b>5 (NA)</b>		<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 512 hospital discharges of Charlevoix County residents where diabetes was listed among the diagnoses. There were 27 (5.3%) of these hospitalizations that were directly due to diabetes, while an additional 181 (35.4%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 391 discharges with 26 (6.7%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	26	6.7%	27	5.3%
Hypertension	3	0.8%	3	0.6%
Other CVD	157	40.2%	178	34.8%
Kidney	3	0.8%	3	0.6%
Pneumonia	14	3.6%	19	3.7%
Other	188	48.1%	282	55.1%
<b>TOTAL</b>	<b>391</b>		<b>512</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 11.1% of the 27 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 11.5% of the 26 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN CHEBOYGAN COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Cheboygan County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,720 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **720 Cheboygan County adults have diabetes but are not aware of it.**<sup>4</sup> Among Cheboygan County adults, **4,721 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Cheboygan County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	220 ( 2.4)	120 ( 2.7)	100 ( 2.1)	210 ( 2.4)
45-54	280 ( 7.4)	170 ( 8.6)	110 ( 6.2)	260 ( 7.0)
55-64	410 (12.3)	190 (10.9)	220 (13.6)	400 (12.2)
65-74	430 (16.1)	220 (17.2)	200 (14.9)	410 (15.6)
75+	380 (17.6)	210 (16.6)	180 (19.0)	370 (17.3)
<b>Total</b> (95% CI**)	<b>1,720 ( 7.2)</b> (±170)	<b>910 ( 7.7)</b> (±120)	<b>810 ( 6.8)</b> (±120)	<b>1,650 ( 7.2)</b> (±170)

\* Difference in totals is due to presence of 80 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Cheboygan County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fifth leading cause of death for Cheboygan County residents. Diabetes was the primary cause of death for 15 individuals (5.3% of all deaths) and a contributing cause in an additional 17 deaths (6%).<sup>6</sup>

### Deaths in Cheboygan County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	1 (NA)	1 (NA)		0 (NA)
55-64	0 (NA)	0 (NA)		0 (NA)
65-74	6 (NA)	4 (NA)		2 (NA)
75+	8 (21.05)	5 (NA)		3 (NA)
<b>Total</b>	<b>15 (8.72)</b>	<b>10 (11.76)</b>		<b>5 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 645 hospital discharges of Cheboygan County residents where diabetes was listed among the diagnoses. There were 21 (3.3%) of these hospitalizations that were directly due to diabetes, while an additional 236 (36.6%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 496 discharges with 23 (4.6%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	23	4.6%	21	3.3%
Hypertension	3	0.6%	2	0.3%
Other CVD	193	38.9%	234	36.3%
Kidney	1	0.2%	2	0.3%
Pneumonia	14	2.8%	33	5.1%
Other	262	52.8%	353	54.7%
<b>TOTAL</b>	<b>496</b>		<b>645</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 7 or 33.3% of the 21 hospital discharges with a primary diagnosis of diabetes. This compares to 5 amputations or 21.7% of the 23 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN CRAWFORD COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Crawford County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **910 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **380 Crawford County adults have diabetes but are not aware of it.**<sup>4</sup> Among Crawford County adults, **2,590 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Crawford County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	120 ( 2.4)	70 ( 2.7)	60 ( 2.1)	120 ( 2.4)
45-54	160 ( 7.4)	90 ( 8.6)	70 ( 6.2)	140 ( 7.0)
55-64	210 (12.3)	100 (10.9)	110 (13.6)	200 (12.2)
65-74	230 (16.1)	120 (17.2)	110 (14.9)	220 (15.6)
75+	190 (17.6)	110 (16.6)	80 (19.0)	190 (17.3)
<b>Total</b> (95% CI**)	<b>910 ( 7.2)</b> (±90)	<b>490 ( 7.7)</b> (±60)	<b>430 ( 6.8)</b> (±70)	<b>870 ( 7.2)</b> (±90)

\* Difference in totals is due to presence of 70 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Crawford County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the eighth leading cause of death for Crawford County residents. Diabetes was the primary cause of death for 3 individuals (1.9% of all deaths) and a contributing cause in an additional 16 deaths (10%).<sup>6</sup>

### Deaths in Crawford County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	0 (NA)	0 (NA)		0 (NA)
75+	2 (NA)	1 (NA)		1 (NA)
<b>Total</b>	<b>3 (NA)</b>	<b>2 (NA)</b>		<b>1 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 488 hospital discharges of Crawford County residents where diabetes was listed among the diagnoses. There were 26 (5.3%) of these hospitalizations that were directly due to diabetes, while an additional 206 (42.2%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 397 discharges with 23 (5.8%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	23	5.8%	26	5.3%
Hypertension	4	1.0%	4	0.8%
Other CVD	183	46.1%	202	41.4%
Kidney	3	0.8%	9	1.8%
Pneumonia	16	4.0%	10	2.0%
Other	168	42.3%	237	48.6%
<b>TOTAL</b>	<b>397</b>		<b>488</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 11.5% of the 26 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 8.7% of the 23 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN EMMET COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Emmet County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,850 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **760 Emmet County adults have diabetes but are not aware of it.**<sup>4</sup> Among Emmet County adults, **5,456 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Emmet County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	280 ( 2.4)	160 ( 2.7)	120 ( 2.1)	260 ( 2.4)
45-54	390 ( 7.4)	230 ( 8.6)	160 ( 6.2)	360 ( 7.0)
55-64	400 (12.3)	180 (10.9)	220 (13.6)	380 (12.2)
65-74	380 (16.1)	220 (17.2)	160 (14.9)	360 (15.6)
75+	400 (17.6)	240 (16.6)	160 (19.0)	390 (17.3)
<b>Total</b> (95% CI**)	<b>1,850 ( 7.2)</b> (±200)	<b>1,030 ( 7.7)</b> (±140)	<b>820 ( 6.8)</b> (±140)	<b>1,750 ( 7.2)</b> (±190)

\* Difference in totals is due to presence of 100 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Emmet County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Emmet County residents. Diabetes was the primary cause of death for 8 individuals (2.6% of all deaths) and a contributing cause in an additional 23 deaths (7.5%).<sup>6</sup>

### Deaths in Emmet County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	0 (NA)	1 (NA)	1 (NA)
45-54	2 (NA)	0 (NA)	2 (NA)	2 (NA)
55-64	1 (NA)	1 (NA)	0 (NA)	0 (NA)
65-74	2 (NA)	1 (NA)	1 (NA)	1 (NA)
75+	2 (NA)	1 (NA)	0 (NA)	0 (NA)
<b>Total</b>	<b>8 (4.32)</b>	<b>3 (NA)</b>	<b>4 (NA)</b>	<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 572 hospital discharges of Emmet County residents where diabetes was listed among the diagnoses. There were 32 (5.6%) of these hospitalizations that were directly due to diabetes, while an additional 196 (34.3%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 462 discharges with 26 (5.6%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	26	5.6%	32	5.6%
Hypertension	2	0.4%	5	0.9%
Other CVD	165	35.7%	191	33.4%
Kidney	3	0.7%	6	1.0%
Pneumonia	16	3.5%	19	3.3%
Other	250	54.1%	319	55.8%
<b>TOTAL</b>	<b>462</b>		<b>572</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 4 or 12.5% of the 32 hospital discharges with a primary diagnosis of diabetes. This compares to 4 amputations or 15.4% of the 26 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN GRAND TRAVERSE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Grand Traverse County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **4,420 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **100 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **50 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **1,800 Grand Traverse County adults have diabetes but are not aware of it.**<sup>4</sup> Among Grand Traverse County adults, **13,154 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Grand Traverse County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	740 ( 2.4)	410 ( 2.7)	330 ( 2.1)	710 ( 2.4)
45-54	950 ( 7.4)	560 ( 8.6)	390 ( 6.2)	890 ( 7.0)
55-64	930 (12.3)	430 (10.9)	500 (13.6)	920 (12.2)
65-74	860 (16.1)	500 (17.2)	360 (14.9)	830 (15.6)
75+	940 (17.6)	560 (16.6)	380 (19.0)	920 (17.3)
<b>Total</b>	<b>4,420 ( 7.2)</b>	<b>2,460 ( 7.7)</b>	<b>1,960 ( 6.8)</b>	<b>4,270 ( 7.2)</b>
(95% CI**)	(±500)	(±350)	(±350)	(±500)

\* Difference in totals is due to presence of 160 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Grand Traverse County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Grand Traverse County residents. Diabetes was the primary cause of death for 14 individuals (2.1% of all deaths) and a contributing cause in an additional 44 deaths (6.7%).<sup>6</sup>

### Deaths in Grand Traverse County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	1 (NA)	0 (NA)		1 (NA)
55-64	2 (NA)	0 (NA)		2 (NA)
65-74	2 (NA)	2 (NA)		0 (NA)
75+	9 (9.57)	7 (12.73)		2 (NA)
<b>Total</b>	<b>14 (3.17)</b>	<b>9 (3.81)</b>		<b>5 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 1,246 hospital discharges of Grand Traverse County residents where diabetes was listed among the diagnoses. There were 76 (6.1%) of these hospitalizations that were directly due to diabetes, while an additional 423 (33.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 1,171 discharges with 81 (6.9%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	81	6.9%	76	6.1%
Hypertension	10	0.9%	27	2.2%
Other CVD	415	35.4%	396	31.8%
Kidney	7	0.6%	27	2.2%
Pneumonia	28	2.4%	22	1.8%
Other	630	53.8%	698	56.0%
<b>TOTAL</b>	<b>1,171</b>		<b>1,246</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 9 or 11.8% of the 76 hospital discharges with a primary diagnosis of diabetes. This compares to 11 amputations or 13.6% of the 81 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN IOSCO COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Iosco County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,920 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **800 Iosco County adults have diabetes but are not aware of it.**<sup>4</sup> Among Iosco County adults, **5,136 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Iosco County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	190 ( 2.4)	110 ( 2.7)	80 ( 2.1)	180 ( 2.4)
45-54	280 ( 7.4)	160 ( 8.6)	110 ( 6.2)	260 ( 7.0)
55-64	450 (12.3)	200 (10.9)	240 (13.6)	440 (12.2)
65-74	540 (16.1)	300 (17.2)	240 (14.9)	520 (15.6)
75+	460 (17.6)	250 (16.6)	210 (19.0)	450 (17.3)
<b>Total</b> (95% CI**)	<b>1,920 ( 7.2)</b> (±170)	<b>1,020 ( 7.7)</b> (±120)	<b>880 ( 6.8)</b> (±120)	<b>1,850 ( 7.2)</b> (±170)

\* Difference in totals is due to presence of 60 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Iosco County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the ninth leading cause of death for Iosco County residents. Diabetes was the primary cause of death for 5 individuals (1.3% of all deaths) and a contributing cause in an additional 20 deaths (5.2%).<sup>6</sup>

### Deaths in Iosco County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	1 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	0 (NA)	0 (NA)		0 (NA)
65-74	1 (NA)	0 (NA)		1 (NA)
75+	3 (NA)	3 (NA)		0 (NA)
<b>Total</b>	<b>5 (NA)</b>	<b>4 (NA)</b>		<b>1 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 760 hospital discharges of Iosco County residents where diabetes was listed among the diagnoses. There were 36 (4.7%) of these hospitalizations that were directly due to diabetes, while an additional 291 (38.3%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 638 discharges with 22 (3.5%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	22	3.5%	36	4.7%
Hypertension	7	1.1%	11	1.4%
Other CVD	278	43.6%	280	36.8%
Kidney	6	0.9%	6	0.8%
Pneumonia	20	3.1%	20	2.6%
Other	305	47.8%	407	53.6%
<b>TOTAL</b>	<b>638</b>		<b>760</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 2.8% of the 36 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 13.6% of the 22 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN KALKASKA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Kalkaska County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,070 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **400 Kalkaska County adults have diabetes but are not aware of it.**<sup>4</sup> Among Kalkaska County adults, **2,845 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Kalkaska County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	160 ( 2.4)	70 ( 2.7)	90 ( 2.1)	130 ( 2.4)
45-54	230 ( 7.4)	90 ( 8.6)	130 ( 6.2)	210 ( 7.0)
55-64	280 (12.3)	140 (10.9)	140 (13.6)	240 (12.2)
65-74	230 (16.1)	100 (17.2)	130 (14.9)	210 (15.6)
75+	170 (17.6)	90 (16.6)	80 (19.0)	160 (17.3)
<b>Total</b> (95% CI**)	<b>1,070 ( 7.2)</b> (±100)	<b>490 ( 7.7)</b> (±70)	<b>570 ( 6.8)</b> (±80)	<b>950 ( 7.2)</b> (±100)

\* Difference in totals is due to presence of 100 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Kalkaska County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fourth leading cause of death for Kalkaska County residents. Diabetes was the primary cause of death for 9 individuals (5.7% of all deaths) and a contributing cause in an additional 15 deaths (9.4%).<sup>6</sup>

### Deaths in Kalkaska County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	1 (NA)	0 (NA)		1 (NA)
55-64	0 (NA)	0 (NA)		0 (NA)
65-74	5 (NA)	2 (NA)		3 (NA)
75+	3 (NA)	1 (NA)		2 (NA)
<b>Total</b>	<b>9 (8.41)</b>	<b>3 (NA)</b>		<b>6 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 367 hospital discharges of Kalkaska County residents where diabetes was listed among the diagnoses. There were 23 (6.3%) of these hospitalizations that were directly due to diabetes, while an additional 128 (34.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 271 discharges with 14 (5.2%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	14	5.2%	23	6.3%
Hypertension	1	0.4%	2	0.5%
Other CVD	102	37.6%	126	34.3%
Kidney	1	0.4%	5	1.4%
Pneumonia	7	2.6%	7	1.9%
Other	146	53.9%	204	55.6%
<b>TOTAL</b>	<b>271</b>		<b>367</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 4 or 17.4% of the 23 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 21.4% of the 14 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN LAKE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Lake County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **770 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **330 Lake County adults have diabetes but are not aware of it.**<sup>4</sup> Among Lake County adults, **2,084 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Lake County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	90 ( 2.4)	50 ( 2.7)	40 ( 2.1)	70 ( 2.4)
45-54	120 ( 7.4)	70 ( 8.6)	50 ( 6.2)	100 ( 7.0)
55-64	190 (12.3)	80 (10.9)	100 (13.6)	170 (12.2)
65-74	210 (16.1)	110 (17.2)	100 (14.9)	180 (15.6)
75+	160 (17.6)	80 (16.6)	80 (19.0)	140 (17.3)
<b>Total</b> (95% CI**)	<b>770 ( 7.2)</b> (±70)	<b>390 ( 7.7)</b> (±50)	<b>370 ( 6.8)</b> (±50)	<b>660 ( 7.2)</b> (±70)

\* Difference in totals is due to presence of 90 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Lake County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fourth leading cause of death for Lake County residents. Diabetes was the primary cause of death for 9 individuals (5.9% of all deaths) and a contributing cause in an additional 5 deaths (3.3%).<sup>6</sup>

### Deaths in Lake County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	3 (NA)	0 (NA)		0 (NA)
75+	5 (NA)	4 (NA)		1 (NA)
<b>Total</b>	<b>9 (11.69)</b>	<b>5 (NA)</b>		<b>1 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 277 hospital discharges of Lake County residents where diabetes was listed among the diagnoses. There were 10 (3.6%) of these hospitalizations that were directly due to diabetes, while an additional 99 (35.7%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 266 discharges with 11 (4.1%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	11	4.1%	10	3.6%
Hypertension	2	0.8%	3	1.1%
Other CVD	105	39.5%	96	34.7%
Kidney	1	0.4%	6	2.2%
Pneumonia	8	3.0%	11	4.0%
Other	139	52.3%	151	54.5%
<b>TOTAL</b>	<b>266</b>		<b>277</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 10.0% of the 10 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 18.2% of the 11 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN LEELANAU COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Leelanau County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,410 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **60 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **590 Leelanau County adults have diabetes but are not aware of it.**<sup>4</sup> Among Leelanau County adults, **4,096 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Leelanau County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	160 ( 2.4)	90 ( 2.7)	70 ( 2.1)	150 ( 2.4)
45-54	280 ( 7.4)	160 ( 8.6)	120 ( 6.2)	260 ( 7.0)
55-64	310 (12.3)	140 (10.9)	170 (13.6)	300 (12.2)
65-74	340 (16.1)	190 (17.2)	160 (14.9)	330 (15.6)
75+	320 (17.6)	160 (16.6)	160 (19.0)	310 (17.3)
<b>Total</b> (95% CI**)	<b>1,410 ( 7.2)</b> (±140)	<b>740 ( 7.7)</b> (±90)	<b>680 ( 6.8)</b> (±100)	<b>1,350 ( 7.2)</b> (±130)

\* Difference in totals is due to presence of 70 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Leelanau County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fifth leading cause of death for Leelanau County residents. Diabetes was the primary cause of death for 6 individuals (3.3% of all deaths) and a contributing cause in an additional 15 deaths (8.2%).<sup>6</sup>

### Deaths in Leelanau County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	0 (NA)		0 (NA)
65-74	1 (NA)	1 (NA)		0 (NA)
75+	4 (NA)	2 (NA)		2 (NA)
<b>Total</b>	<b>6 (NA)</b>	<b>3 (NA)</b>		<b>2 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 335 hospital discharges of Leelanau County residents where diabetes was listed among the diagnoses. There were 26 (7.8%) of these hospitalizations that were directly due to diabetes, while an additional 120 (35.8%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 305 discharges with 20 (6.6%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	20	6.6%	26	7.8%
Hypertension	3	1.0%	4	1.2%
Other CVD	101	33.1%	116	34.6%
Kidney	2	0.7%		0.0%
Pneumonia	9	3.0%	5	1.5%
Other	170	55.7%	184	54.9%
<b>TOTAL</b>	<b>305</b>		<b>335</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 11.5% of the 26 hospital discharges with a primary diagnosis of diabetes. This compares to 4 amputations or 20.0% of the 20 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
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# DIABETES IN MANISTEE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Manistee County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,600 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **60 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **660 Manistee County adults have diabetes but are not aware of it.**<sup>4</sup> Among Manistee County adults, **4,394 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Manistee County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	210 ( 2.4)	110 ( 2.7)	100 ( 2.1)	190 ( 2.4)
45-54	280 ( 7.4)	160 ( 8.6)	120 ( 6.2)	260 ( 7.0)
55-64	350 (12.3)	150 (10.9)	190 (13.6)	340 (12.2)
65-74	380 (16.1)	210 (17.2)	170 (14.9)	360 (15.6)
75+	380 (17.6)	210 (16.6)	170 (19.0)	370 (17.3)
<b>Total</b> (95% CI**)	<b>1,600 ( 7.2)</b> (±160)	<b>840 ( 7.7)</b> (±110)	<b>750 ( 6.8)</b> (±120)	<b>1,520 ( 7.2)</b> (±160)

\* Difference in totals is due to presence of 70 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Manistee County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fifth leading cause of death for Manistee County residents. Diabetes was the primary cause of death for 19 individuals (5.9% of all deaths) and a contributing cause in an additional 18 deaths (5.6%).<sup>6</sup>

### Deaths in Manistee County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	0 (NA)		1 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	4 (NA)	2 (NA)		2 (NA)
75+	13 (34.21)	7 (33.33)		6 (NA)
<b>Total</b>	<b>19 (11.88)</b>	<b>10 (12.35)</b>		<b>9 (12.68)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 548 hospital discharges of Manistee County residents where diabetes was listed among the diagnoses. There were 19 (3.5%) of these hospitalizations that were directly due to diabetes, while an additional 186 (33.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 537 discharges with 22 (4.1%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	22	4.1%	19	3.5%
Hypertension	3	0.6%	3	0.5%
Other CVD	222	41.3%	183	33.4%
Kidney	6	1.1%	4	0.7%
Pneumonia	12	2.2%	20	3.6%
Other	272	50.7%	319	58.2%
<b>TOTAL</b>	<b>537</b>		<b>548</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 5.3% of the 19 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 9.1% of the 22 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN MASON COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Mason County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,760 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **70 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **720 Mason County adults have diabetes but are not aware of it.**<sup>4</sup> Among Mason County adults, **4,882 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Mason County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	240 ( 2.4)	130 ( 2.7)	100 ( 2.1)	230 ( 2.4)
45-54	320 ( 7.4)	190 ( 8.6)	130 ( 6.2)	300 ( 7.0)
55-64	400 (12.3)	180 (10.9)	220 (13.6)	400 (12.2)
65-74	370 (16.1)	210 (17.2)	160 (14.9)	360 (15.6)
75+	430 (17.6)	250 (16.6)	180 (19.0)	420 (17.3)
<b>Total</b> (95% CI**)	<b>1,760 ( 7.2)</b> (±180)	<b>960 ( 7.7)</b> (±120)	<b>790 ( 6.8)</b> (±130)	<b>1,710 ( 7.2)</b> (±180)

\* Difference in totals is due to presence of 50 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Mason County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the ninth leading cause of death for Mason County residents. Diabetes was the primary cause of death for 5 individuals (1.5% of all deaths) and a contributing cause in an additional 27 deaths (8.2%).<sup>6</sup>

### Deaths in Mason County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)	0 (NA)	0 (NA)
45-54	1 (NA)	0 (NA)	1 (NA)	0 (NA)
55-64	0 (NA)	0 (NA)	0 (NA)	0 (NA)
65-74	1 (NA)	1 (NA)	0 (NA)	0 (NA)
75+	3 (NA)	1 (NA)	2 (NA)	2 (NA)
<b>Total</b>	<b>5 (NA)</b>	<b>2 (NA)</b>	<b>3 (NA)</b>	<b>3 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 620 hospital discharges of Mason County residents where diabetes was listed among the diagnoses. There were 26 (4.2%) of these hospitalizations that were directly due to diabetes, while an additional 232 (37.4%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 525 discharges with 23 (4.4%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	23	4.4%	26	4.2%
Hypertension	7	1.3%	5	0.8%
Other CVD	191	36.4%	227	36.6%
Kidney	7	1.3%	15	2.4%
Pneumonia	15	2.9%	35	5.6%
Other	282	53.7%	312	50.3%
<b>TOTAL</b>	<b>525</b>		<b>620</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 3.8% of the 26 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 13.0% of the 23 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN MECOSTA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Mecosta County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **2,180 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **40 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **30 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **880 Mecosta County adults have diabetes but are not aware of it.**<sup>4</sup> Among Mecosta County adults, **5,873 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Mecosta County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	410 ( 2.4)	220 ( 2.7)	190 ( 2.1)	380 ( 2.4)
45-54	360 ( 7.4)	210 ( 8.6)	150 ( 6.2)	330 ( 7.0)
55-64	500 (12.3)	230 (10.9)	270 (13.6)	490 (12.2)
65-74	500 (16.1)	280 (17.2)	230 (14.9)	480 (15.6)
75+	410 (17.6)	230 (16.6)	190 (19.0)	400 (17.3)
<b>Total</b> (95% CI**)	<b>2,180 ( 7.2)</b> (±250)	<b>1,170 ( 7.7)</b> (±170)	<b>1,030 ( 6.8)</b> (±190)	<b>2,080 ( 7.2)</b> (±250)

\* Difference in totals is due to presence of 150 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Mecosta County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Mecosta County residents. Diabetes was the primary cause of death for 10 individuals (2.8% of all deaths) and a contributing cause in an additional 19 deaths (5.3%).<sup>6</sup>

### Deaths in Mecosta County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	0 (NA)	1 (NA)	1 (NA)
45-54	0 (NA)	0 (NA)	0 (NA)	0 (NA)
55-64	0 (NA)	0 (NA)	0 (NA)	0 (NA)
65-74	2 (NA)	2 (NA)	0 (NA)	0 (NA)
75+	7 (17.07)	4 (NA)	3 (NA)	3 (NA)
<b>Total</b>	<b>10 (4.59)</b>	<b>6 (NA)</b>	<b>4 (NA)</b>	<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 624 hospital discharges of Mecosta County residents where diabetes was listed among the diagnoses. There were 31 (5.0%) of these hospitalizations that were directly due to diabetes, while an additional 224 (35.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 688 discharges with 43 (6.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	43	6.3%	31	5.0%
Hypertension	7	1.0%	5	0.8%
Other CVD	244	35.5%	219	35.1%
Kidney	10	1.5%	8	1.3%
Pneumonia	35	5.1%	30	4.8%
Other	349	50.7%	331	53.0%
<b>TOTAL</b>	<b>688</b>		<b>624</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 6 or 19.4% of the 31 hospital discharges with a primary diagnosis of diabetes. This compares to 10 amputations or 23.3% of the 43 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN MISSAUKEE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Missaukee County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **830 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **340 Missaukee County adults have diabetes but are not aware of it.**<sup>4</sup> Among Missaukee County adults, **2,387 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Missaukee County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	130 ( 2.4)	70 ( 2.7)	60 ( 2.1)	130 ( 2.4)
45-54	150 ( 7.4)	80 ( 8.6)	60 ( 6.2)	140 ( 7.0)
55-64	190 (12.3)	90 (10.9)	110 (13.6)	190 (12.2)
65-74	180 (16.1)	100 (17.2)	80 (14.9)	180 (15.6)
75+	180 (17.6)	100 (16.6)	80 (19.0)	180 (17.3)
<b>Total</b> (95% CI**)	<b>830 ( 7.2)</b> (±90)	<b>440 ( 7.7)</b> (±60)	<b>390 ( 6.8)</b> (±60)	<b>820 ( 7.2)</b> (±90)

\* Difference in totals is due to presence of 10 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Missaukee County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Missaukee County residents. Diabetes was the primary cause of death for 4 individuals (2.8% of all deaths) and a contributing cause in an additional 6 deaths (4.3%).<sup>6</sup>

### Deaths in Missaukee County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	1 (NA)	1 (NA)		0 (NA)
75+	2 (NA)	2 (NA)		0 (NA)
<b>Total</b>	<b>4 (NA)</b>	<b>4 (NA)</b>		<b>0 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 227 hospital discharges of Missaukee County residents where diabetes was listed among the diagnoses. There were 12 (5.3%) of these hospitalizations that were directly due to diabetes, while an additional 81 (35.7%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 243 discharges with 16(6.6%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	16	6.6%	12	5.3%
Hypertension	0	0.0%	0	0.0%
Other CVD	105	43.2%	81	35.7%
Kidney	4	1.7%	2	0.9%
Pneumonia	11	4.5%	4	1.8%
Other	107	44.0%	128	56.4%
<b>TOTAL</b>	<b>243</b>		<b>227</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 0 or 0.0% of the 12 hospital discharges with a primary diagnosis of diabetes. This compares to 1 amputation or 6.3% of the 16 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN MONTMORENCY COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Montmorency County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **790 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **330 Montmorency County adults have diabetes but are not aware of it.**<sup>4</sup> Among Montmorency County adults, **2,064 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Montmorency County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	70 ( 2.4)	40 ( 2.7)	30 ( 2.1)	70 ( 2.4)
45-54	110 ( 7.4)	70 ( 8.6)	50 ( 6.2)	110 ( 7.0)
55-64	180 (12.3)	90 (10.9)	90 (13.6)	180 (12.2)
65-74	230 (16.1)	120 (17.2)	110 (14.9)	220 (15.6)
75+	200 (17.6)	110 (16.6)	90 (19.0)	190 (17.3)
<b>Total</b> (95% CI**)	<b>790 ( 7.2)</b> (±70)	<b>430 ( 7.7)</b> (±50)	<b>370 ( 6.8)</b> (±50)	<b>770 ( 7.2)</b> (±70)

\* Difference in totals is due to presence of 50 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Montmorency County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Montmorency County residents. Diabetes was the primary cause of death for 5 individuals (3.3% of all deaths) and a contributing cause in an additional 17 deaths (11.3%).<sup>6</sup>

### Deaths in Montmorency County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	1 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	1 (NA)	0 (NA)		1 (NA)
65-74	0 (NA)	0 (NA)		0 (NA)
75+	3 (NA)	2 (NA)		1 (NA)
<b>Total</b>	<b>5 (NA)</b>	<b>3 (NA)</b>		<b>2 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 291 hospital discharges of Montmorency County residents where diabetes was listed among the diagnoses. There were 16 (5.5%) of these hospitalizations that were directly due to diabetes, while an additional 113 (38.8%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 269 discharges with 13 (4.8%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	13	4.8%	16	5.5%
Hypertension	5	1.9%	3	1.0%
Other CVD	99	36.8%	110	37.8%
Kidney	5	1.9%	5	1.7%
Pneumonia	8	3.0%	10	3.4%
Other	139	51.7%	147	50.5%
<b>TOTAL</b>	<b>269</b>		<b>291</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 2 or 12.5% of the 16 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 15.4% of the 13 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN NEWAYGO COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Newaygo County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **2,600 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **160 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **30 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **1,080 Newaygo County adults have diabetes but are not aware of it.**<sup>4</sup> Among Newaygo County adults, **7,722 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Newaygo County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	420 ( 2.4)	240 ( 2.7)	180 ( 2.1)	410 ( 2.4)
45-54	510 ( 7.4)	290 ( 8.6)	220 ( 6.2)	470 ( 7.0)
55-64	610 (12.3)	270 (10.9)	330 (13.6)	590 (12.2)
65-74	560 (16.1)	300 (17.2)	250 (14.9)	530 (15.6)
75+	500 (17.6)	290 (16.6)	220 (19.0)	490 (17.3)
<b>Total</b> (95% CI**)	<b>2,600 ( 7.2)</b> (±290)	<b>1,390 ( 7.7)</b> (±200)	<b>1,200 ( 6.8)</b> (±210)	<b>2,490 ( 7.2)</b> (±290)

\* Difference in totals is due to presence of 110 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Newaygo County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the seventh leading cause of death for Newaygo County residents. Diabetes was the primary cause of death for 19 individuals (4.4% of all deaths) and a contributing cause in an additional 28 deaths (6.4%).<sup>6</sup>

### Deaths in Newaygo County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	3 (NA)	1 (NA)		2 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	3 (NA)	1 (NA)		1 (NA)
75+	12 (24.00)	8 (28.57)		4 (NA)
<b>Total</b>	<b>19 (7.31)</b>	<b>11 (8.40)</b>		<b>7 (5.98)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 842 hospital discharges of Newaygo County residents where diabetes was listed among the diagnoses. There were 51 (6.1%) of these hospitalizations that were directly due to diabetes, while an additional 317 (37.6%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 816 discharges with 51 (6.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	51	6.3%	51	6.1%
Hypertension	6	0.7%	11	1.3%
Other CVD	281	34.4%	306	36.3%
Kidney	7	0.9%	14	1.7%
Pneumonia	32	3.9%	29	3.4%
Other	439	53.8%	431	51.2%
<b>TOTAL</b>	<b>816</b>		<b>842</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 5.9% of the 51 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 5.9% of the 51 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN OCEANA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Oceana County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,500 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **270 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **620 Oceana County adults have diabetes but are not aware of it.**<sup>4</sup> Among Oceana County adults, **4,393 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Oceana County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	240 ( 2.4)	130 ( 2.7)	110 ( 2.1)	230 ( 2.4)
45-54	280 ( 7.4)	160 ( 8.6)	120 ( 6.2)	260 ( 7.0)
55-64	340 (12.3)	150 (10.9)	190 (13.6)	340 (12.2)
65-74	340 (16.1)	190 (17.2)	150 (14.9)	330 (15.6)
75+	300 (17.6)	170 (16.6)	130 (19.0)	290 (17.3)
<b>Total</b> (95% CI**)	<b>1,500 ( 7.2)</b> (±160)	<b>800 ( 7.7)</b> (±110)	<b>700 ( 6.8)</b> (±120)	<b>1,450 ( 7.2)</b> (±160)

\* Difference in totals is due to presence of 40 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Oceana County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Oceana County residents. Diabetes was the primary cause of death for 9 individuals (3.8% of all deaths) and a contributing cause in an additional 10 deaths (4.2%).<sup>6</sup>

### Deaths in Oceana County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	1 (NA)	0 (NA)	0 (NA)
45-54	1 (NA)	0 (NA)	1 (NA)	1 (NA)
55-64	1 (NA)	1 (NA)	0 (NA)	0 (NA)
65-74	2 (NA)	2 (NA)	0 (NA)	0 (NA)
75+	4 (NA)	1 (NA)	3 (NA)	3 (NA)
<b>Total</b>	<b>9 (6.00)</b>	<b>5 (NA)</b>	<b>4 (NA)</b>	<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 484 hospital discharges of Oceana County residents where diabetes was listed among the diagnoses. There were 35 (7.2%) of these hospitalizations that were directly due to diabetes, while an additional 160 (33.1%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 514 discharges with 25 (4.9%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	25	4.9%	35	7.2%
Hypertension	2	0.4%	5	1.0%
Other CVD	175	34.1%	155	32.0%
Kidney	12	2.3%	10	2.1%
Pneumonia	20	3.9%	16	3.3%
Other	280	54.5%	263	54.3%
<b>TOTAL</b>	<b>514</b>		<b>484</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 5 or 14.3% of the 35 hospital discharges with a primary diagnosis of diabetes. This compares to 0 amputations or 0.0% of the 25 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN OGEMAW COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Ogemaw County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,440 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **600 Ogemaw County adults have diabetes but are not aware of it.**<sup>4</sup> Among Ogemaw County adults, **3,949 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Ogemaw County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	170 ( 2.4)	90 ( 2.7)	70 ( 2.1)	160 ( 2.4)
45-54	230 ( 7.4)	130 ( 8.6)	90 ( 6.2)	210 ( 7.0)
55-64	340 (12.3)	160 (10.9)	190 (13.6)	340 (12.2)
65-74	380 (16.1)	210 (17.2)	170 (14.9)	370 (15.6)
75+	320 (17.6)	180 (16.6)	150 (19.0)	320 (17.3)
<b>Total</b> (95% CI**)	<b>1,440 ( 7.2)</b> (±140)	<b>770 ( 7.7)</b> (±90)	<b>670 ( 6.8)</b> (±100)	<b>1,400 ( 7.2)</b> (±140)

\* Difference in totals is due to presence of 40 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Ogemaw County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Ogemaw County residents. Diabetes was the primary cause of death for 8 individuals (2.9% of all deaths) and a contributing cause in an additional 22 deaths (7.9%).<sup>6</sup>

### Deaths in Ogemaw County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	2 (NA)	1 (NA)		1 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	2 (NA)	0 (NA)		2 (NA)
75+	3 (NA)	2 (NA)		1 (NA)
<b>Total</b>	<b>8 (5.56)</b>	<b>4 (NA)</b>		<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 673 hospital discharges of Ogemaw County residents where diabetes was listed among the diagnoses. There were 31 (4.6%) of these hospitalizations that were directly due to diabetes, while an additional 255 (37.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 591 discharges with 21 (3.6%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	21	3.6%	31	4.6%
Hypertension	4	0.7%	11	1.6%
Other CVD	248	42.0%	244	36.3%
Kidney	7	1.2%	7	1.0%
Pneumonia	19	3.2%	34	5.1%
Other	292	49.4%	346	51.4%
<b>TOTAL</b>	<b>591</b>		<b>673</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 5 or 16.1% of the 31 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 9.5% of the 21 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN OSCEOLA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Osceola County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,320 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **550 Osceola County adults have diabetes but are not aware of it.**<sup>4</sup> Among Osceola County adults, **3,861 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Osceola County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	200 ( 2.4)	110 ( 2.7)	90 ( 2.1)	200 ( 2.4)
45-54	240 ( 7.4)	140 ( 8.6)	100 ( 6.2)	230 ( 7.0)
55-64	310 (12.3)	140 (10.9)	170 (13.6)	310 (12.2)
65-74	310 (16.1)	170 (17.2)	140 (14.9)	300 (15.6)
75+	260 (17.6)	150 (16.6)	120 (19.0)	260 (17.3)
<b>Total</b> (95% CI**)	<b>1,320 ( 7.2)</b> (±140)	<b>710 ( 7.7)</b> (±100)	<b>620 ( 6.8)</b> (±100)	<b>1,300 ( 7.2)</b> (±140)

\* Difference in totals is due to presence of 40 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Osceola County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Osceola County residents. Diabetes was the primary cause of death for 8 individuals (3.8% of all deaths) and a contributing cause in an additional 14 deaths (6.7%).<sup>6</sup>

### Deaths in Osceola County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	1 (NA)	0 (NA)		1 (NA)
55-64	2 (NA)	1 (NA)		1 (NA)
65-74	2 (NA)	1 (NA)		1 (NA)
75+	3 (NA)	1 (NA)		1 (NA)
<b>Total</b>	<b>8 (6.06)</b>	<b>3 (NA)</b>		<b>4 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 441 hospital discharges of Osceola County residents where diabetes was listed among the diagnoses. There were 45 (10.2%) of these hospitalizations that were directly due to diabetes, while an additional 163 (37.0%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 438 discharges with 32 (7.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	32	7.3%	45	10.2%
Hypertension	3	0.7%	6	1.4%
Other CVD	149	34.0%	157	35.6%
Kidney	5	1.1%	8	1.8%
Pneumonia	9	2.1%	12	2.7%
Other	240	54.8%	213	48.3%
<b>TOTAL</b>	<b>438</b>		<b>441</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 5 or 11.1% of the 45 hospital discharges with a primary diagnosis of diabetes. This compares to 3 amputations or 9.4% of the 32 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN OSCODA COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Oscoda County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **660 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **270 Oscoda County adults have diabetes but are not aware of it.**<sup>4</sup> Among Oscoda County adults, **1,784 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Oscoda County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	70 ( 2.4)	40 ( 2.7)	30 ( 2.1)	70 ( 2.4)
45-54	100 ( 7.4)	60 ( 8.6)	40 ( 6.2)	90 ( 7.0)
55-64	160 (12.3)	70 (10.9)	90 (13.6)	160 (12.2)
65-74	180 (16.1)	90 (17.2)	80 (14.9)	170 (15.6)
75+	150 (17.6)	80 (16.6)	70 (19.0)	150 (17.3)
<b>Total</b> (95% CI**)	<b>660 ( 7.2)</b> (±60)	<b>340 ( 7.7)</b> (±40)	<b>310 ( 6.8)</b> (±40)	<b>640 ( 7.2)</b> (±60)

\* Difference in totals is due to presence of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Oscoda County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fourth leading cause of death for Oscoda County residents. Diabetes was the primary cause of death for 6 individuals (6.1% of all deaths) and a contributing cause in an additional 8 deaths (8.1%).<sup>6</sup>

### Deaths in Oscoda County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	1 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	2 (NA)	0 (NA)		2 (NA)
65-74	1 (NA)	1 (NA)		0 (NA)
75+	2 (NA)	1 (NA)		1 (NA)
<b>Total</b>	<b>6 (NA)</b>	<b>3 (NA)</b>		<b>3 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 279 hospital discharges of Oscoda County residents where diabetes was listed among the diagnoses. There were 11 (3.9%) of these hospitalizations that were directly due to diabetes, while an additional 117 (41.9%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 240 discharges with 15 (6.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	15	6.3%	11	3.9%
Hypertension	3	1.3%	1	0.4%
Other CVD	106	44.2%	116	41.6%
Kidney	2	0.8%	3	1.1%
Pneumonia	9	3.8%	8	2.9%
Other	105	43.8%	140	50.2%
<b>TOTAL</b>	<b>240</b>		<b>279</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 9.1% of the 11 hospital discharges with a primary diagnosis of diabetes. This compares to 0 amputations or 0.0% of the 15 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

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# DIABETES IN OTSEGO COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Otsego County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,330 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **560 Otsego County adults have diabetes but are not aware of it.**<sup>4</sup> Among Otsego County adults, **3,939 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Otsego County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	210 ( 2.4)	120 ( 2.7)	90 ( 2.1)	210 ( 2.4)
45-54	250 ( 7.4)	150 ( 8.6)	110 ( 6.2)	240 ( 7.0)
55-64	300 (12.3)	140 (10.9)	170 (13.6)	300 (12.2)
65-74	310 (16.1)	160 (17.2)	140 (14.9)	300 (15.6)
75+	260 (17.6)	140 (16.6)	120 (19.0)	260 (17.3)
<b>Total</b> (95% CI**)	<b>1,330 ( 7.2)</b> (±150)	<b>710 ( 7.7)</b> (±100)	<b>630 ( 6.8)</b> (±100)	<b>1,310 ( 7.2)</b> (±150)

\* Difference in totals is due to presence of 50 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Otsego County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the sixth leading cause of death for Otsego County residents. Diabetes was the primary cause of death for 8 individuals (3.7% of all deaths) and a contributing cause in an additional 15 deaths (6.9%).<sup>6</sup>

### Deaths in Otsego County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	1 (NA)	0 (NA)	1 (NA)	1 (NA)
45-54	0 (NA)	0 (NA)	0 (NA)	0 (NA)
55-64	0 (NA)	0 (NA)	0 (NA)	0 (NA)
65-74	2 (NA)	1 (NA)	1 (NA)	1 (NA)
75+	5 (NA)	2 (NA)	3 (NA)	3 (NA)
<b>Total</b>	<b>8 (6.02)</b>	<b>3 (NA)</b>	<b>5 (NA)</b>	<b>5 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 367 hospital discharges of Otsego County residents where diabetes was listed among the diagnoses. There were 20 (5.4%) of these hospitalizations that were directly due to diabetes, while an additional 133 (36.2%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 293 discharges with 13 (4.4%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	13	4.4%	20	5.4%
Hypertension	3	1.0%	5	1.4%
Other CVD	112	38.2%	128	34.9%
Kidney	5	1.7%	2	0.5%
Pneumonia	12	4.1%	15	4.1%
Other	148	50.5%	197	53.7%
<b>TOTAL</b>	<b>293</b>		<b>367</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 5.0% of the 20 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 15.4% of the 13 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN PRESQUE ISLE COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Presque Isle County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,030 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **10 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **430 Presque Isle County adults have diabetes but are not aware of it.**<sup>4</sup> Among Presque Isle County adults, **2,706 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Presque Isle County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	100 ( 2.4)	60 ( 2.7)	50 ( 2.1)	100 ( 2.4)
45-54	160 ( 7.4)	90 ( 8.6)	70 ( 6.2)	150 ( 7.0)
55-64	220 (12.3)	100 (10.9)	120 (13.6)	220 (12.2)
65-74	280 (16.1)	150 (17.2)	130 (14.9)	270 (15.6)
75+	270 (17.6)	150 (16.6)	120 (19.0)	270 (17.3)
<b>Total</b> (95% CI**)	<b>1,030 ( 7.2)</b> (±90)	<b>550 ( 7.7)</b> (±60)	<b>490 ( 6.8)</b> (±70)	<b>1,010 ( 7.2)</b> (±90)

\* Difference in totals is due to presence of 40 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Presque Isle County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the eighth leading cause of death for Presque Isle County residents. Diabetes was the primary cause of death for 2 individuals (1.2% of all deaths) and a contributing cause in an additional 29 deaths (17%).<sup>6</sup>

### Deaths in Presque Isle County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	0 (NA)	0 (NA)		0 (NA)
65-74	1 (NA)	0 (NA)		1 (NA)
75+	1 (NA)	1 (NA)		0 (NA)
<b>Total</b>	<b>2 (NA)</b>	<b>1 (NA)</b>		<b>1 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 279 hospital discharges of Presque Isle County residents where diabetes was listed among the diagnoses. There were 10 (3.6%) of these hospitalizations that were directly due to diabetes, while an additional 105 (37.6%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 318 discharges with 20 (6.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	20	6.3%	10	3.6%
Hypertension	3	0.9%	4	1.4%
Other CVD	121	38.1%	101	36.2%
Kidney	1	0.3%	3	1.1%
Pneumonia	9	2.8%	17	6.1%
Other	164	51.6%	144	51.6%
<b>TOTAL</b>	<b>318</b>		<b>279</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 1 or 10.0% of the 10 hospital discharges with a primary diagnosis of diabetes. This compares to 5 amputations or 25.0% of the 20 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN ROSCOMMON COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Roscommon County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,960 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **20 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **10 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **820 Roscommon County adults have diabetes but are not aware of it.**<sup>4</sup> Among Roscommon County adults, **5,086 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Roscommon County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	170 ( 2.4)	100 ( 2.7)	80 ( 2.1)	170 ( 2.4)
45-54	270 ( 7.4)	160 ( 8.6)	110 ( 6.2)	250 ( 7.0)
55-64	470 (12.3)	210 (10.9)	250 (13.6)	460 (12.2)
65-74	570 (16.1)	300 (17.2)	260 (14.9)	550 (15.6)
75+	480 (17.6)	270 (16.6)	220 (19.0)	470 (17.3)
<b>Total</b> (95% CI**)	<b>1,960 ( 7.2)</b> (±170)	<b>1,040 ( 7.7)</b> (±120)	<b>920 ( 6.8)</b> (±120)	<b>1,900 ( 7.2)</b> (±170)

\* Difference in totals is due to presence of 60 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Roscommon County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the fifth leading cause of death for Roscommon County residents. Diabetes was the primary cause of death for 17 individuals (4.3% of all deaths) and a contributing cause in an additional 25 deaths (6.3%).<sup>6</sup>

### Deaths in Roscommon County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	0 (NA)	0 (NA)		0 (NA)
55-64	4 (NA)	2 (NA)		2 (NA)
65-74	4 (NA)	3 (NA)		1 (NA)
75+	9 (18.75)	4 (NA)		5 (NA)
<b>Total</b>	<b>17 (8.67)</b>	<b>9 (9.00)</b>		<b>8 (8.89)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 865 hospital discharges of Roscommon County residents where diabetes was listed among the diagnoses. There were 39 (4.5%) of these hospitalizations that were directly due to diabetes, while an additional 341 (39.4%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 750 discharges with 32 (4.3%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	32	4.3%	39	4.5%
Hypertension	9	1.2%	7	0.8%
Other CVD	329	43.9%	334	38.6%
Kidney	5	0.7%	20	2.3%
Pneumonia	19	2.5%	17	2.0%
Other	356	47.5%	448	51.8%
<b>TOTAL</b>	<b>750</b>		<b>865</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 3 or 7.7% of the 39 hospital discharges with a primary diagnosis of diabetes. This compares to 2 amputations or 6.3% of the 32 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
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# DIABETES IN WEXFORD COUNTY

## Estimated Number of Persons With Diabetes (PWD) in Wexford County

Estimates from the Michigan Behavioral Risk Factor Surveillance System (BRFSS) using a three year average, 2001-2003, indicate that in 2002 approximately **1,720 adults (aged 18 and up) have been diagnosed with diabetes.**<sup>1</sup> This includes an estimated **30 Latinos/Hispanics (8.65%)** diagnosed with diabetes.<sup>2</sup> In addition, it is estimated that **20 or 0.32% persons under the age of 18** have been diagnosed with diabetes.<sup>3</sup> National studies suggest that an additional **700 Wexford County adults have diabetes but are not aware of it.**<sup>4</sup> Among Wexford County adults, **4,922 have pre-diabetes** (40.1% of adults 40-74 years of age).<sup>5</sup>

### Estimated Number of Persons in Wexford County in 2002 Diagnosed with Diabetes (Rate per 100)<sup>1</sup>

Age Group	Total*	Female	Male	White
18-44	270 ( 2.4)	150 ( 2.7)	120 ( 2.1)	260 ( 2.4)
45-54	330 ( 7.4)	190 ( 8.6)	140 ( 6.2)	310 ( 7.0)
55-64	370 (12.3)	170 (10.9)	200 (13.6)	370 (12.2)
65-74	380 (16.1)	210 (17.2)	170 (14.9)	360 (15.6)
75+	370 (17.6)	220 (16.6)	150 (19.0)	370 (17.3)
<b>Total</b> (95% CI**)	<b>1,720 ( 7.2)</b> (±190)	<b>940 ( 7.7)</b> (±130)	<b>780 ( 6.8)</b> (±130)	<b>1,670 ( 7.2)</b> (±190)

\* Difference in totals is due to presence of 60 of "other races" in the survey and the effects of rounding.

\*\* 95% CI represents the range within which the actual number of persons with diabetes in Wexford County may fall with 95% confidence.

## Diabetes Deaths

In 2002, diabetes was the eighth leading cause of death for Wexford County residents. Diabetes was the primary cause of death for 5 individuals (1.7% of all deaths) and a contributing cause in an additional 19 deaths (6.3%).<sup>6</sup>

### Deaths in Wexford County of PWD for the Year 2002 with Diabetes Listed as the Primary Cause Number of Deaths (Rates per 1,000 Diabetic Population)

Age Group	Total*	Female	White	Male
0-44	0 (NA)	0 (NA)		0 (NA)
45-54	1 (NA)	0 (NA)		1 (NA)
55-64	1 (NA)	1 (NA)		0 (NA)
65-74	0 (NA)	0 (NA)		0 (NA)
75+	3 (NA)	2 (NA)		1 (NA)
<b>Total</b>	<b>5 (NA)</b>	<b>3 (NA)</b>		<b>2 (NA)</b>

\* Any difference in the totals is due to presence of deaths of "other races". NA – Not Able to calculate with 6 or less deaths

**Diabetes Hospitalizations Reported in the Michigan Inpatient Data Base (MIDB)**<sup>7</sup> In 2002, there were 654 hospital discharges of Wexford County residents where diabetes was listed among the diagnoses. There were 41 (6.3%) of these hospitalizations that were directly due to diabetes, while an additional 256 (39.1%) involved hypertension and cardiovascular disease, conditions commonly associated with diabetes. In 2000, the comparable figures were 616 discharges with 49 (8.0%) directly attributed to diabetes.

### Primary Reason for Hospitalization

Condition	2000		2002	
	Count	Percent	Count	Percent
Diabetes	49	8.0%	41	6.3%
Hypertension	8	1.3%	6	0.9%
Other CVD	237	38.5%	250	38.2%
Kidney	4	0.7%	10	1.5%
Pneumonia	22	3.6%	6	0.9%
Other	296	48.1%	341	52.1%
<b>TOTAL</b>	<b>616</b>		<b>654</b>	

### Non-Traumatic Lower Limb Amputations

In 2002, some form of non-traumatic lower limb amputation occurred in 6 or 14.6% of the 41 hospital discharges with a primary diagnosis of diabetes. This compares to 4 amputations or 8.2% of the 49 hospitalizations of persons with diabetes in 2000.

- 1) Michigan 2002 population estimates and the three year (2001-03) average from the Behavioral Risk Factor Surveillance System (BRFSS) - a statewide telephone survey of Michigan residents ages 18 years and older.
- 2) BRFSS data 2001 - 2003 rate of 8.65% ±1.64 Confidence Interval of 95% (CI).
- 3) Blue Cross/Blue Shield of Michigan Paid Claims Data, 2001 and BRFSS 2001-2003 data.
- 4) National Health and Nutrition Examination Survey, III 1988-1994 (NHANES III Series 11, No. 1).
- 5) US Health and Human Services news release, March 27, 2004.
- 6) Michigan Department of Community Health (MDCH) 2002 resident death data files.
- 7) Michigan Inpatient (hospital discharge) Database (MIDB) for 2002.

Further information can be obtained from:

Michigan Department of Community Health, Division of Chronic Disease and Injury Control/Diabetes, Kidney and Other Chronic Diseases Section  
by calling (517) 335-8445 or on the WEB at: <http://www.michigan.gov/diabetes>